

AMENDMENTS TO THE CLAIMS

Please cancel claim 5 without prejudice, and amend claims 1, 6, 11, and 19 as follows:

1. (Currently Amended) A method of determining inventory levels of parts for a plurality of stocking locations, said method comprising:

providing data for a plurality of customer locations, unit price of said parts, request rates for each of said parts for each of said customer locations, handling costs for each of said stocking locations, and travel time and transportation cost between said stocking locations;

specifying a parts procurement time performance measure for transfer of said parts from said plurality of stocking locations to said plurality of customer locations, wherein said parts procurement time performance measure comprises the percentage of parts in said request rates which can be transferred from any said stocking location to each respective said customer location within a pre-specified time, and wherein equipment requiring one or more of said parts ~~resides~~ is installed at one or more of said plurality of customer locations;

entering said data and said performance measure into an optimization computer program;

computing said inventory levels of said parts for said plurality of stocking locations using said optimization computer program; and

23 ordering sufficient numbers of said parts to maintain said
24 inventory levels at said plurality of stocking locations, wherein
25 said inventory levels are such that said performance measure is
26 met.

1 2. (Previously Presented) The method of claim 1, wherein said
2 data for said plurality of customer locations includes travel
3 time and cost to transfer a part from each of said plurality of
4 stocking locations to each of said customer locations.

1 3. (Previously Presented) The method of claim 1, wherein said
2 request rates include a probability distribution for one or more
3 of said request rates.

1 4. (Original) The method of claim 3, wherein said probability
2 distribution is a Poisson distribution.

1 5. (Cancelled)

1 6. (Currently Amended) The method of claim 51, wherein said parts
2 are grouped by importance into a plurality of groups and said
3 pre-specified time comprises a corresponding plurality of times.

1 7. (Original) The method of claim 6, wherein inventory levels are
2 computed to minimize overall cost while meeting or exceeding said
3 plurality of times.

1 8. (Original) The method of claim 1, wherein said optimization
2 computer program is a mixed integer optimization program.

1 9. (Previously Presented) The method of claim 1, wherein said
2 inventory levels are computed to meet a total inventory cost

3 while maximizing the percentage of said parts in said request
4 rates which can be transferred from any said stocking location to
5 each respective said customer location within a pre-specified
6 time.

1 10. (Previously Presented) The method of claim 1, further
2 comprising computing the estimated time for each part to be
3 transferred from any said stocking location to each respective
4 said customer location for each of said parts in said request
5 rates.

1 11. (Currently Amended) A computer implemented method of
2 specifying parts inventory levels for a network of stocking
3 locations, said method comprising:

4 providing data for a plurality of customer locations, unit price
5 of said parts, request rates for each of said parts for each of
6 said customer locations, handling costs for each of said stocking
7 locations, and travel time and transportation cost between said
8 stocking locations;

9 specifying a parts procurement time performance measure for
10 transfer of said parts from said network of stocking locations to
11 said plurality of customer locations, wherein said parts
12 procurement time performance measure comprises the percentage of
13 parts in said request rates which can be transferred from any
14 stocking location of said network of stocking locations to each
15 respective said customer location within a pre-specified time,
16 and wherein equipment requiring one or more of said parts ~~resides~~
17 is installed at one or more of said plurality of customer
18 locations;

19 formulating a mixed integer optimization model of said network;
20 and

21 entering said model on a processor to solve said mixed integer
22 model to obtain said inventory levels for each of said stocking
23 locations in said network, wherein said inventory levels are such
24 that said performance measure is met.

1 12. (Original) The method of claim 11, wherein said model
2 includes a total inventory cost constraint.

1 13. (Original) The method of claim 11, wherein said inventory
2 levels are solved to minimize overall cost while meeting or
3 exceeding said parts procurement time performance measure.

1 14. (Withdrawn) A computer system for controlling inventory
2 levels of parts for a plurality of stocking locations,
3 comprising:

4 a processor;

5 one or more files on said computer system containing data for a
6 plurality of customer locations, unit price of said parts,
7 request rates for each of said parts for each of said customer
8 locations, handling costs for each of said stocking locations,
9 and travel time and transportation cost between said stocking
10 locations;

11 means for computing on said processor a parts procurement time
12 performance measure;

13 an optimization computer program on said processor for

14 calculating said inventory levels of parts for said plurality of
15 stocking locations; and

16 an ordering system on said computer system for maintaining said
17 inventory levels at said plurality of stocking locations.

1 15. (Withdrawn) The system of claim 14, wherein said data for a
2 plurality of customer locations includes travel time and cost to
3 transfer a part from each of said plurality of stocking locations
4 to each of said customer locations.

1 16. (Withdrawn) The system of claim 14, wherein said request
2 rates includes a probability distribution for one or more of said
3 request rates.

1 17. (Withdrawn) The system of claim 14, further comprising a
2 mixed integer model of said network.

1 18. (Withdrawn) The system of claim 17, wherein said model is
2 formulated to minimize overall cost while meeting or exceeding a
3 pre-specified parts procurement time performance measure.

1 19. (Currently Amended) A computer program product for
2 instructing a processor to determine inventory levels of parts
3 for a plurality of stocking locations, said computer program
4 product comprising;

5 a computer readable medium;

6 first program instruction means for providing data for a
7 plurality of customer locations, unit price of said parts,
8 request rates for each of said parts for each of said customer

9 locations, handling costs for each of said stocking locations,
10 and travel time and transportation cost between said stocking
11 locations;

12 second program instruction means for specifying a parts
13 procurement time performance measure for transfer of said parts
14 from said plurality of stocking locations to said plurality of
15 customer locations, wherein said parts procurement time
16 performance measure comprises the percentage of parts in said
17 request rates which can be transferred from any said stocking
18 location to each respective said customer location within a
19 pre-specified time, and wherein equipment requiring one or more
20 of said parts ~~resides~~ is installed at one or more of said
21 plurality of customer locations;

22 third program instruction means for entering said data and said
23 performance measure into an optimization computer program;

24 fourth program instruction means for computing said inventory
25 levels of said parts for said plurality of stocking locations
26 using said optimization computer program; and

27 fifth program instruction means for ordering sufficient numbers
28 of said parts to maintain said inventory levels at said plurality
29 of stocking locations, wherein said inventory levels are such
30 that said performance measure is met; and wherein

31 all said program instruction means are recorded on said medium.

1 20. (Previously Presented) A method of determining inventory
2 levels of parts for a plurality of stocking locations, said
3 method comprising:

4 providing data for a plurality of customer locations, unit price
5 of said parts, request rates for each of said parts for each of
6 said customer locations, handling costs for each of said stocking
7 locations, and travel time and transportation cost between said
8 stocking locations;

9 specifying a parts procurement time performance measure, wherein
10 said parts procurement time performance measure comprises the
11 percentage of parts in said request rates which can be
12 transferred from any said stocking location to each said
13 respective customer location within a pre-specified time;

14 entering said data and said performance measure into an
15 optimization computer program;

16 computing said inventory levels of said parts for said plurality
17 of stocking locations using said optimization computer program;
18 and

19 ordering sufficient numbers of said parts to maintain said
20 inventory levels at said plurality of stocking locations.

1 21. (Previously Presented) The method of claim 20, wherein said
2 parts are grouped by importance into a plurality of groups and
3 said pre-specified time comprises a corresponding plurality of
4 times.

1 22. (Previously Presented) The method of claim 21, wherein
2 inventory levels are computed to minimize overall cost while
3 meeting or exceeding said plurality of times.

1 23. (Previously Presented) A method of determining inventory

2 levels of parts for a plurality of stocking locations, said
3 method comprising:

4 providing data for a plurality of customer locations, unit price
5 of said parts, request rates for each of said parts for each of
6 said customer locations, handling costs for each of said stocking
7 locations, and travel time and transportation cost between said
8 stocking locations;

9 specifying a parts procurement time performance measure;

10 entering said data and said performance measure into an
11 optimization computer program;

12 computing said inventory levels of said parts for said plurality
13 of stocking locations using said optimization computer program,
14 wherein said inventory levels are computed to meet a total
15 inventory cost while maximizing the percentage of said parts in
16 said request rates which can be transferred from any said
17 stocking location to each respective said customer location
18 within a pre-specified time; and

19 ordering sufficient numbers of said parts to maintain said
20 inventory levels at said plurality of stocking locations.